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POLIOMYELITIS (INFANTILE PARALYSIS).

A REPORT OF AN OUTBREAK IN TEXARKANA AND VICINITY.

By EDWARD FRANCIS, Surgeon, United States Public Health Service.

Since 1905, which year marked a severe outbreak in Norway and Sweden, epidemics of poliomyelitis have occurred at intervals in the United States. The following paper is a report of an outbreak in Texarkana and vicinity.

Distribution of cases.

	Popula- tion.	Number of cases.		Popula- tion.	Number of cases.
Texarkana, Tex., Ark.....	17,000	50	New Boaton, Tex.....	950	12
De Queen, Ark.....	2,018	10	Hooks, Tex.....	98	3
Lockesburg, Ark.....	748	20	Nash, Tex.....	210	10
Wilton, Ark.....	294	7	Queen City, Tex.....	388	4
Ashdown, Ark.....	1,247	9	Total.....		143
Annona, Tex.....	429	8			
De Kalb, Tex.....	650	10			

Fifty cases occurred in Texarkana or within 2 miles of the city limits; 46 cases occurred in Sevier and Little River Counties, Ark.; and 47 cases in Bowie, Red River, and Cass Counties, Tex.

The county cases are ascribed in the table to towns because the physicians live in the towns, but of the 93 cases outside of Texarkana, 66 were in the families of farmers or in families living under farm conditions, and 27 were in the towns.

SEASONAL PREVALENCE.

The seasonal prevalence of this outbreak is unusual, in that it occurred in early summer rather than late summer and fall. One hundred and twenty-four of the one hundred and forty-three cases had their onset in the 30-day period between May 20 and June 18. The first case was on April 5, and this was followed by 13 others before May 20 and by 5 after June 18.

Ages of cases.

Cases.	Cases.
Under 1 year.....	15
Between 1 and 2 years.....	36
Between 2 and 3 years.....	29
Between 3 and 4 years.....	17
Between 4 and 5 years.....	11
Between 5 and 6 years.....	6
Between 6 and 7 years.....	3
Between 7 and 8 years.....	1
Between 8 and 9 years.....	2
Total.....	129

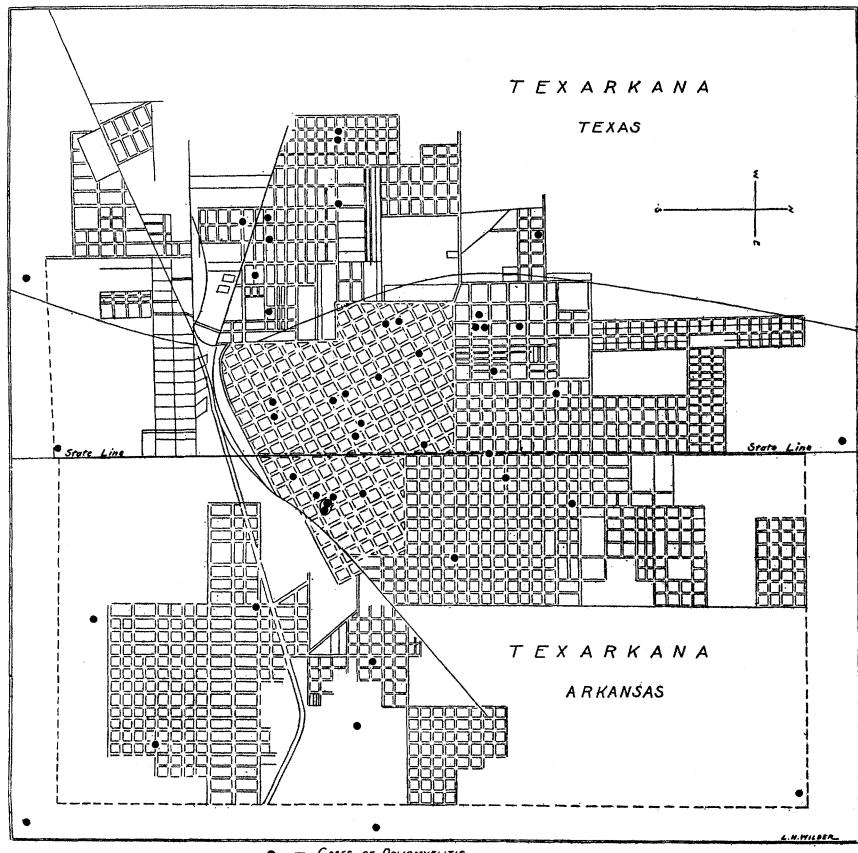


FIG. 1.

In 129 of the cases the age was ascertained. Eighty-eight per cent were under the school age of 6 years. Sixty-two per cent were under 3 years of age. In 82 families in which the number and ages of the children in each family were learned, the total number of children was 315. In 62 of the 82 families the youngest child was attacked. In 14 out of the 82 it was the next to the youngest child. In one instance there were three cases in the same family. In three instances there were two, and in each of the other 139 families there was but one case.

Part paralyzed.

	Cases.	Cases.	
Right arm alone.....	2	Arm, both legs.....	1
Left arm alone.....	6	Left face.....	1
Both arms.....	2	Face, leg.....	1
Right leg alone.....	13	Left face, left leg.....	1
Left leg alone.....	17	Face, right arm, right leg.....	1
Leg alone.....	5	Ptosis, right face.....	1
Both legs alone.....	26	Ptosis, both legs.....	1
Both feet.....	1	Right eye, legs.....	1
All extremities.....	11	Neck.....	1
Right arm, right leg.....	2	Neck, arm.....	1
Right arm, left leg.....	2	Neck, right arm.....	1
Right arm, both feet.....	1	Neck, both legs.....	1
Left arm, left leg.....	6	Back, both legs.....	1
Left arm, right leg.....	1	Deglutition.....	4
Left arm, both legs.....	1	Deglutition and respiration.....	2
Left arm, both feet.....	1	Deglutition face, right arm, left leg.....	1
Arm, leg.....	2		

**TEXARKANA
AND
SURROUNDING
COUNTIES**

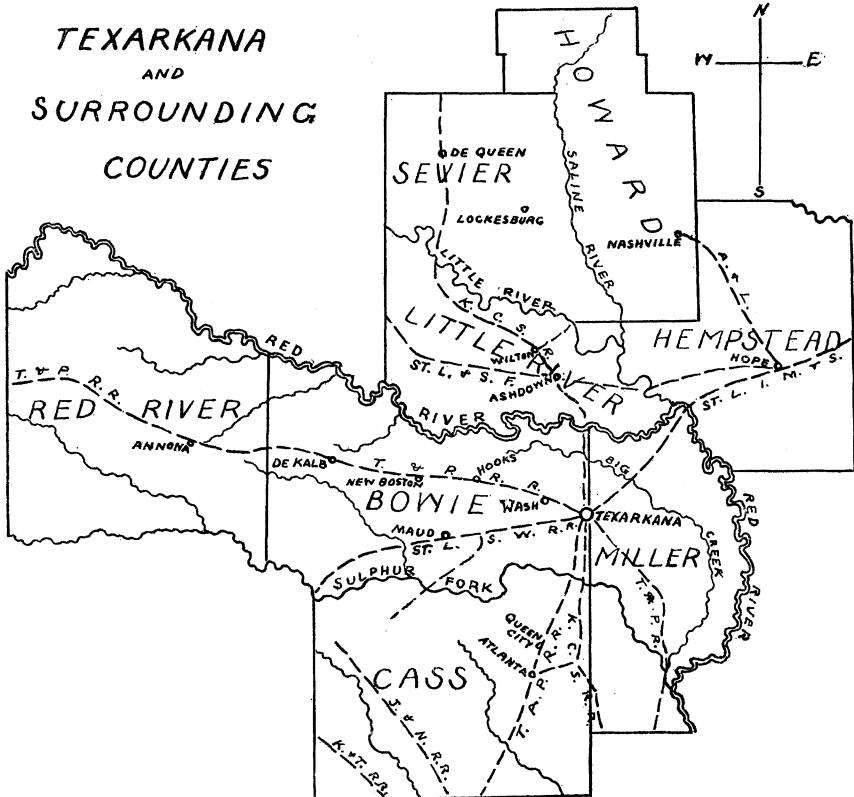


FIG. 2.

The legs were more frequently paralyzed than the arms. In 119 cases in which the part paralyzed was determined, the arms participated 42 times and the legs 98. Five of the seven cases in which there was paralysis of the muscles of deglutition resulted fatally.

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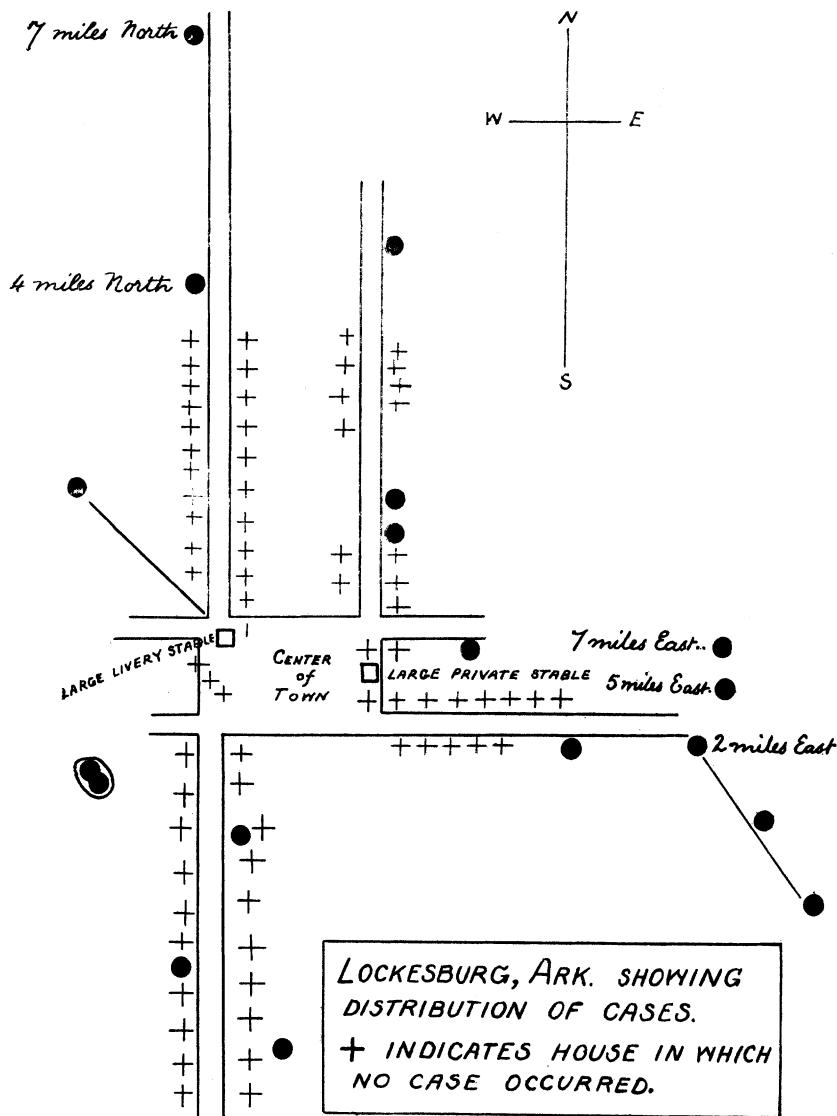


FIG. 3.

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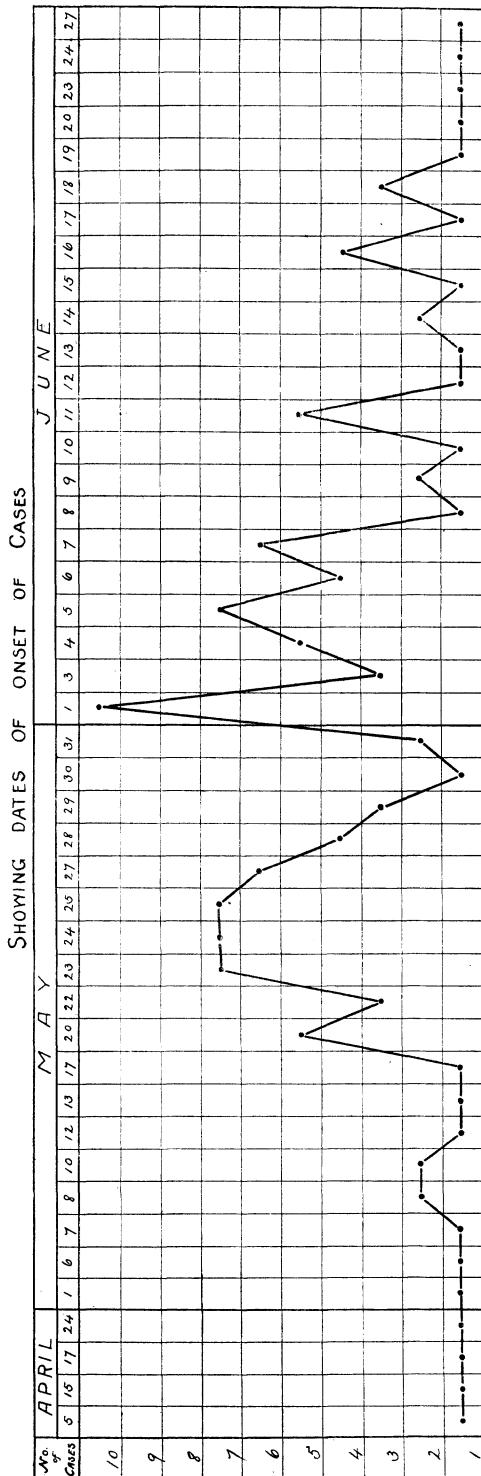


FIG. 4.

Case fatality.

	Number of cases.	Number of deaths.	Fatality rate per 100 cases.
White.....			
Colored.....	124 19	8 7	6.4 36.8
Total.....	143	15	10.5

REGULATIONS FOR THE PREVENTION OF THE SPREAD OF POLIOMYELITIS, PUT INTO EFFECT JUNE 9 IN TEXARKANA.

- (A) All cases of the disease are to be reported to the health officer.
- (B) The patient is to be confined to a compartment thoroughly screened against flies and so confined for a period of three weeks from the onset of the disease. Only physicians and nurses shall be permitted within the screened compartment.
- (C) Members of the family and others who have been in contact with the patient are to be confined to the premises during the quarantine period, with the exception of the breadwinner. All visitors are to be excluded from the premises.
- (D) Disinfection of all articles of clothing and eating utensils coming in contact with the patient is to be accomplished by boiling immediately after use.
- (E) A terminal disinfection of the house with formaldehyde is to be made on lifting the quarantine at the expiration of three weeks.
- (F) All parts of the premises are to be maintained in a sanitary condition.